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The Impact of Implementing T.E.A.M Framework Towards Virtual Learning Effectiveness

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Abstract

The Covid-19 pandemic has resulted to virtual learning been implemented as a new norm of learning. Teachers must be able to interact with students using different sources in order to create new learning experience using virtual learning. The main discussion aims to recognise the impact of teaching and learning in introducing virtual learning to students. The problems some teachers and students face include too much workload or online assignment, technology dependent, vague instructions and de-professionalism. The impact of teaching and learning were measured using a framework created by Danielson for teaching and learning which are planning and preparation, classroom environment, instructions and professional responsibilities. The framework will guide teachers to identify their responsibilities and help students improve learning. An online survey was conducted among 41 lecturers using convenience sampling technique. The suggestions given were based on T.E.A.M. concept which consists of transmissions of knowledge and effective framework, establish teachers and students' involvements, assess students in learning and maintain professional development. The key finding of this paper is the impact of implementing T.E.A.M. framework towards the effectiveness of virtual learning.

Keywords Teaching; Virtual learning; Danielson Framework; T.E.A.M. concept

Introduction

Teaching is the process of transferring knowledge and directions which links to learning and learner (Hasa, 2017). Teaching encourages communication and collaboration among students through the construction of learning materials and environment (El-Seoud, Islam, Taj-Eddin, Naglaa, El.Khouly &

Nosseir, 2014). Currently, teachers are changing their teaching delivery by introducing virtual learning to students. Learning is the combination of understanding, the way a person behaves, skills and values (Hasa, 2017). Learning enables students to participate in discussion, debates, develop understanding and construct knowledge which will lead to better learning experience (Lyndon & Hale, 2014). Teaching and learning work hand-in-hand in order to make the educational environment more sustainable with the implementation of virtual learning. Virtual learning requires a computer to assist students' centered & collaborative learning (Jethro, Grace & Thomas, 2012). Virtual learning is a tool that is used to aid learning process in most international universities and the effectiveness of delivery depends on its virtual learning methods (El-Seoud et al., 2014).

Traditional vs Virtual Learning

Traditional learning is a way to attend classes in a physical classroom where teachers and students meet face-to-face (University of Potomac, 2019). Traditional learning enables students to directly interact with teachers and other peers by sharing their views or even ask questions (De, 2018). De (2018) also mentioned that students will be motivated to strive towards better achievements when they have good interaction in classrooms. Robbins (2019) found that good routines, hands-on examples and developing good social skills are advantages of traditional learning. However traditional learning has its disadvantages too whereby teachers and students will not have flexible hours, takes time to commute from home to the university and students listen passively (Robbins, 2019). The brick and mortar learning gives opportunities for teachers to identify their students' strengths and weaknesses so that students will be guided in their studies (GK, 2020). Study.com (2019) mentioned that traditional learning is teacher centred, where teachers will conduct their teaching based on their subject expertise. Traditional learning focuses on teachers giving instructions to students to memorize or recite hence students will not be able to further enhance their critical thinking and decision making skills (Essays, 2018).

Virtual learning refers to students' learning which takes place with the presence of devices that can be connected to the Internet at any time and place (Robbins, 2019). Robbins (2019) mentioned that students were able to build their own resources for subject topics and offered different mediums for students to search for information. Students were able to decide their own learning time without having a prefixed schedule to follow (GK, 2020). GK (2020) also mentioned that live lecture session, materials, interactive videos, games and online chats were used in virtual learning. A study done by Computer Aided e-Learning (2020) found that teachers' and students' roles changed as they have to adapt to the use virtual learning whereby participation is important. Virtual learning enables students to improve their technical skills especially when they have to download learning materials or participate in any online quizzes (Corporate Finance Institute, 2020). The instructions given in virtual learning were most

often regarded as student centred whereby students were able to determine their own pace of learning when they attend virtual classes (Study.com, 2019)

Problems or Issues Faced in Teaching & Learning in Higher Education that Called for Innovation

Virtual learning is a tool that has been used to aid learning process in most international universities and the effectiveness of delivery depends on its virtual learning methods (El-Seoud et al., 2014). Virtual learning was introduced to support the education system which assisted learners in learning regardless of their location and time (Al.Summarraie, El-Ebiary, Kazem, Almandeel & Alshamasi, 2019). The problems some teachers and students faced include too much workload or online assignment, technology dependent, vague instructions and de-professionalism.

Past study mentioned that, some student voluntarily shared ideas but failed to enhance their knowledge through discussion given by teachers (Quiroz, 2008). Problem arises when both teachers and students are too dependent on technology, unreasonable materials given to students, insufficient training for teachers and it also affects learners with special needs (Al.Summarraie et al., 2019). Previous study mentioned that, virtual learning may reduce attendance at lecture classes and de-professionalism of teachers' role (Lyndon & Hale, 2014). Students will have the perception that if the lecture sessions were recorded, they will not attend classes as they can view it later. As for teachers, they did not practice professionalism when they reduce the virtual learning time due to lack of participation. Some students were affected by information overload, objectivity, habitual and motivational problem (Lyndon & Hale, 2014). According to Lyndon & Hale, 2014, introverts may prefer anonymous discussion forums when teachers conduct online discussions.

The suggestions given were based on T.E.A.M. concept which was derived from Danielson framework for teaching and learning. The authors relate to four main elements of Danielson framework which are planning and preparation, classroom environment, instructions and professional responsibilities. Danielson framework will be a suitable base to create T.E.A.M. concept which could address the issue mentioned in this study. T.E.A.M. concept consists of transmission of knowledge and effective framework (planning and preparation), establish teachers and students involvement (classroom environment), assess student in learning (instructions) and maintain professional development (professional responsibilities). T.E.A.M. concept could be implemented in order to address these issues by helping students to have better understanding of their subjects and at the same time build good rapport with teachers. This concept could also help teachers assess students effectively by using appropriate approach and maintain teachers' professionalism.

Research Questions

1. What is the impact of transmission of knowledge to students towards the effectiveness of virtual learning?
2. What is the impact of establishing teachers and students' involvement towards the effectiveness of virtual learning?
3. What is the impact of assessing students in learning towards the effectiveness of virtual learning?
4. What is the impact of maintaining professional development towards the effectiveness of virtual learning?

Literature Review

Virtual Learning, T.E.A.M. Concept (T – Transmit Knowledge to Students)

Virtual learning enabled teachers to choose and use various materials and applications to evaluate course content (Mosquera, 2016). El-Seoud et al. (2014) mentioned that teachers should **transmit knowledge** by preparing relevant course materials by using various educational strategies. Previous studies stated that teachers can create effective framework by providing coverage of the subject matter, develop links to selected websites and provide explanations to clarify certain important information. According to Jethro, Grace and Thomas (2012), students were able to have access to virtual learning resources and met their personal learning objectives when a teacher effectively transmit relevant knowledge to them.

Mosquera (2016) suggested teachers should proactively change curricula, teaching framework and learning activities to cater to the various needs of students. A study conducted by Cassinelli (2018) suggested that teachers should have effective strategies, identify objectives of learning for students and use resources that focus on student-centred learning. Teachers should be able to transmit knowledge to students by having good command of the subject, choosing resources that were aligned with the learning outcome and create a well-designed instruction plan (Danielson, 2014). Virtual learning in virtual classrooms can assist in effective class management which enable teachers to deliver information to students about the subject taught (Anekwe, 2017). Anekwe (2017) also mentioned that teachers were able to provide collaborative construction of knowledge using synchronous and/or asynchronous communication.

Previous study mentioned that the important part in planning and preparation is to do research on best practices to help identify teachers' teaching philosophy (Meador, 2019). Meador (2019) also mentioned that teachers should create detailed plan of action and guidelines for students to follow.

Lesson can be constructed using instructional materials that were obtained from existing resources whereby teachers were able to choose to publish according to students' needs (Dougherty, 2020). A study done by Phillips (2016), stated that students who have attended virtual classroom have different needs compared to meeting them physically – syllabus and materials must be prepared before class starts. Content creation, designing student assessment and learning activities were the aims of planning and preparing for virtual learning (University of Technology Sydney, 2019). University of Technology Sydney (2019) also suggested that teachers should be able to determine what students should learn, understand and able to do after the completion of the lesson. Learning materials should be prepared in detail so that students will be flexible in accessing it (University of Technology Sydney, 2019). Teachers should design online work for students by stating clear guidelines and create questions that require students to relate with their personal experiences (International Baccalaureate Organisation, 2020). Hanover Research (2014) suggested that programme coordinators should set goals that include personalised learning or better university preparedness. It is important to appoint a coordinator who will be responsible for organising online sessions for both teachers and students so that virtual learning can be a success (Peterson-Ahmad, Pemberton & Hovey, 2018).

Virtual Learning, T.E.A.M. Concept (E – Establish Teachers & Students Involvement)

Teachers and students' involvement can be **established** by monitoring students' online presence and provide continuous feedback (El-Seoud et al., 2014). Past studies also stated that teachers should be aware of students' concern when using virtual learning and use goals to explain, advise and give preliminary exercises (El-Seoud et al., 2014). Masquera (2016) mentioned that students felt enthusiastic and were motivated when teachers used virtual learning. Previous study mentioned that a sense of community was build for both teachers and students (Lyndon & Hale, 2014).

It is essential for teachers to understand their students' motivation in order to have better interaction in facilitating students in virtual learning (El-Seoud et al., 2014). El-Seoud et al. (2014) also suggested to review and change teaching approaches used in traditional courses so that students will feel that they are engaged to teachers and learning at the same time. Past study also stated that teachers were able to facilitate more student using virtual learning while maintaining the quality of the learning outcome quality (Jethro, Grace & Thomas, 2012). Establishing the involvement between teachers and students reduced the feeling of isolation and disengagement (Lyndon & Hale, 2014). Mosquera (2016) stated that virtual learning is an area of interaction that both teachers and students can use to present and share resources.

Previous studies suggested that tutors and learners' involvement can be facilitated in virtual learning, hence becoming a mean to manage learning experience (Mosquera, 2016). Danielson (2014)

mentioned that teachers and student's interaction should be suitable to the ages of students and the respect shown to teachers. Teachers establish involvement with the students by informing them the importance of virtual learning and build the confidence that hardworking students can be successful (Danielson, 2014). Danielson (2014) also suggested that teachers should prepare good instructions in order to reach high level of involvement with students.

Virtual learning environment is a set of teaching and learning kit, the use of computer and internet can be created to improve students' learning experience (Loureiro & Bettencourt, 2014). Loureiro & Bettencourt (2014) mentioned that the use of media platform and web tools have been adapted into virtual learning environment. Teachers and students were able to interact with each other and it is easier to find or share information and content (Loureiro & Bettencourt, 2014). The same study done by Loureiro & Bettencourt (2014) stated that the class environment or virtual learning enable students to make contributions towards the growth of the community which relates to information, content and development of digital skills. The class environment for virtual learning allowed teachers to create rapport with more students which will lead to more virtual learners (Loureiro & Bettencourt, 2014).

Virtual learning can be an interactive learning environment whereby students were able to explore subjects, coordinate new ideas, develop connection with teachers or other students and have control on their own learning process (Aguiar & Cassiani, 2007). Roddy, Aniet, Chung, Holt, Shaw, McKenzie, Garivaldis, M.Lodge & Mundy (2017) found that an effective virtual learning environment laid on appropriate interaction through various formats which consists of email, live question and answer session, feedback as well as assessment. Orientation services should be included as one of the ways to manage virtual classes – prepare overviews of course structure, recommend time expectations to students, introduction of instructional software or media and guidelines on communication tools required for teacher-student interaction (Roddy et al., 2017). Roddy et al. (2017) also mentioned that the culture of learning in virtual learning domain can be established when teachers maintained students' engagement by using appropriate pedagogical approaches. A study conducted by Hu & Potter (2012) suggested that in order to prepare a constructive online learning environment teachers should be encouraging, interactive, have a safe online platform, flexible and engaging. Integration of assessments, learning outcomes and instructional strategies can be used to construct an effective online environment (Hu & Potter, 2014). Spataro (2020) suggested that in order to have better communication with students, teachers may use Skype and Fligrd. Spataro (2020) also mentioned that students will stay connected with teachers if teachers motivate their class and bring lessons to life or connect with students individually.

Virtual Learning, T.E.A.M. Concept (A – Assessing Students in Learning)

The best method to **assess students** is to use summative assessment at the finale of the course (El-Seoud et al., 2014). Online assessments were conducted as a routine with outcome connected to students' e-tracker (The Office for Standards in Education, Children's Services & Skills, 2013). Students were aware that they were able to develop their own concepts and ideas when they were assessed by their teachers (Lameras, Paraskakis & Levy, 2013). Past study also stated that students were able to establish meaning for understanding topics taught by their teachers (Lameras, Paraskakis & Levy, 2013).

In order to make sure that the virtual learning is maintained in terms of the quality of content and understanding, teachers should set outcome-based quality assurance metrics. Through this, teachers can measure the student's proficiency in the subject and reduce the achievement gap. Based on Johannesen (2013), he mentioned that it is very important to have constant assessment when it comes to online learning. This is because measuring and evaluating the social interaction between student-student and student-teacher is vital in making sure that the student is right on track and learning the content accordingly. This constant assessment is needed to measure the effectiveness of technological tools used to facilitate students in the virtual learning classes.

A research done by Popham (2010), he mentioned that it is important to know the motivation behind any assessment being conducted in a virtual class. The purpose of the assessment being carried out is very important to make sure that students gain the necessary knowledge, information and skills based on the learning outcomes. An effective and quality virtual learning will take place in the context of proper assessment being set with a clear learning outcome and motivation.

In online learning it is more important to have assessment compared to physical class because the teacher needs to make sure that the learning outcomes were achieved. This can be conducted by assessing the level of students' knowledge. At the same time, timely and constructive feedback is important in students' learning. After every assessment, it is necessary to provide feedback to the students, hence avoiding students to continue getting poor result. Assessment and feedback based on the environmental consideration will enhance online learning.

A good teaching and learning process requires both assessment of teaching and learning. The assessment need to be developed in a way that it covers the entire learning outcomes that were set. Assessment for learning will enable the teacher to incorporate assessment with their instructional processes (Danielson, 2017).

Virtual Learning, T.E.A.M. Concept (M – Maintaining Professional Development)

The teacher is the main “actor” in the virtual classroom. On that note, they must always maintain their professionalism as how they show it in physical classes. In order to be prepared for virtual teaching and learning, it is crucial to make virtual learning go smoothly and effectively. It is understood that the teachers with early preparation in teaching methods and strategies have a greater chance of success longevity in class (Ingersoll, Merrill, & May, 2012). Reflecting on their own teaching after every online classes will allow teachers to deliver a more accurate and impactful lesson. Through a reflection on the lesson, teachers can also determine areas to focus in preparing exercises and assessments (Danielson, 2013).

Lameras, Paraskakis & Levy (2013) mentioned that teachers should **maintain their professional development** by executing the role of a teacher as provider of information, motivator and organiser. Teachers who execute administrative role will direct their students to various learning resources (Lameras, Paraskakis & Levy, 2013). Lameras, Paraskakis & Levy (2013) suggested that students can maintain their professional development by being a developer of concepts and self-motivated explorer. Since the teaching and learning were done virtually, progress of assignments and projects were difficult to be monitored. Keeping an accurate record on the completion of assignments and project is vital because these records will inform the relationship between the students and teacher in monitoring learning and later conduct minor adjustment (Danielson, 2013). Proper instruction and tracking system can help lecturers to maintain their professional development.

Virtual learning is new to most educators, thus maintaining their own professional development is very essential to assure students were prioritised and teachers supportive of their student. A teacher need to always have a strong compass that directs them to act for the best interest of their students. Teachers will be able to identify their students’ needs by going the extra mile which is beyond the classroom to seek information or guidance for students.

Therefore, the environment of working, sharing knowledge and strategies need to be developed among educators. Exchanging best practices will enhance the professional development of teachers hence improving their instructional content and knowledge deliverance through online skills. Teachers were encouraged to join academic online courses to enhance their knowledge and pedagogical skills especially during this unprecedented pandemic period.

Methodology

Survey Questionnaire

A Likert scale questionnaire was used to find out the population's response on the impact of implementing T.E.A.M framework towards virtual learning effectiveness. The sample size consisted of 41 respondents from Multimedia University Melaka and Cyberjaya campus, INTI International University & Colleges, New Era College, UCSI University and UniKL Malaysia. The respondents were lecturers from all levels of programme (Foundation, Diploma, Undergraduate and Postgraduate).

The survey questions consisted of seven parts and were analysed based on the responses given by the respondents. Part A showed the respondents' demographic (4 items). Part B aimed to gauge the understanding of the respondents towards virtual learning (4 items). Part C showed the respondents' planning and preparation in order to transmit knowledge to students (4 items). Part D depicted the establishment of student-teacher involvement in virtual class environment (4 items). Part E showed ways to assess students' learning in a virtual learning environment (4 items). Part F was related to the ways to maintain professional development (4 items). Part G referred to virtual learning effectiveness towards both teachers and students (4 items).

The research method applied to collect the necessary information for this study was via self-administrated online survey from 41 lecturers. The analysis used in the context of this study is multiple regression analysis. Through this study, it has been proven that two of the independent variables, which included "E – Establish teachers and student's involvement and A – Assessing students in learning" do have significant impact on the virtual learning effectiveness, except "T - transmit knowledge to student and M – maintaining professional development".

Research Framework

This study's framework represents the relationship between the independent variables (transmit knowledge to students, establish teachers and students' involvement, assessing students in learning and maintaining professional development) and the dependent variable (the effectiveness of virtual learning). It is important that the variables were well understood first before developing the hypotheses. The proposed hypotheses developed were as follow:

H1 – *There is a significant positive relationship between knowledge transmitting process to students and the effectiveness of virtual learning*

H2 – *There is a significant positive relationship between establish teachers and students' involvement and the effectiveness of virtual learning*

H3 – There is a significant positive relationship between assessing students in learning and the effectiveness of virtual learning

H4 – There is a significant positive relationship between maintaining professional development and the effectiveness of virtual learning

With that, the four elements of independent variables and dependent variables will be able to be integrated in creating a significant study for education industry in Malaysia.

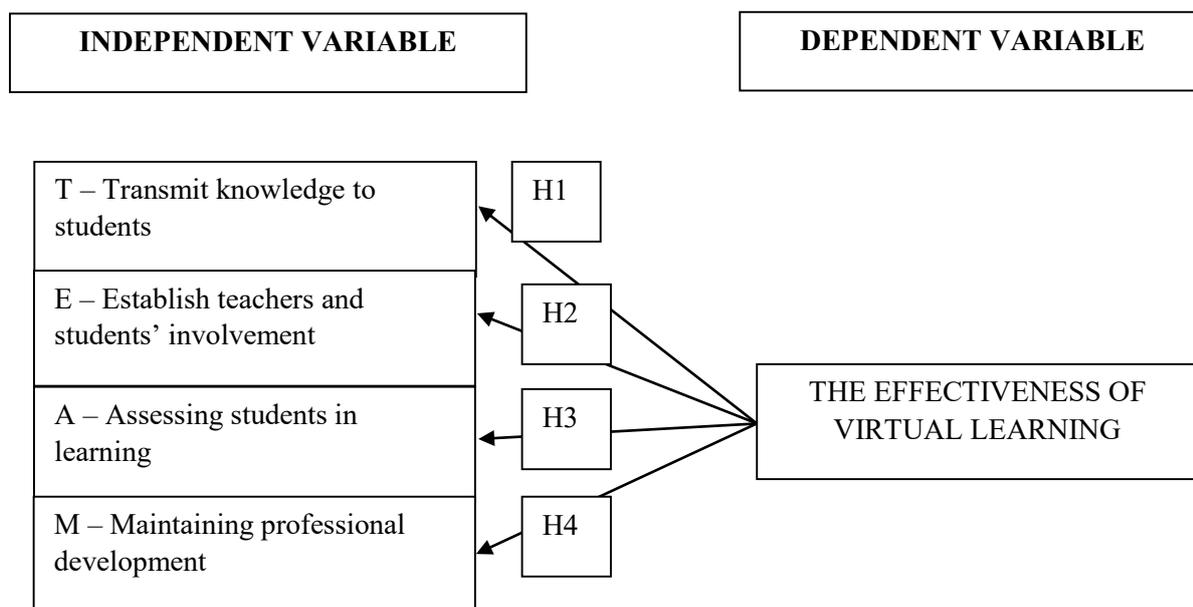


Figure 1 The Research Framework

Result

A total of 60 surveys have been distributed to a number of universities in Malaysia. However, only 41 responses received which was 68.33% of response rate. Figure 2.0 depicts the age of the respondents. Generally, majority of the respondents were considered young. The largest age group was 31 – 40 years old (27 / 65.9%). The second largest group was 41 – 50 years old (13 / 31.7%) and followed by 51 – 60 years old (1 / 2.4%).

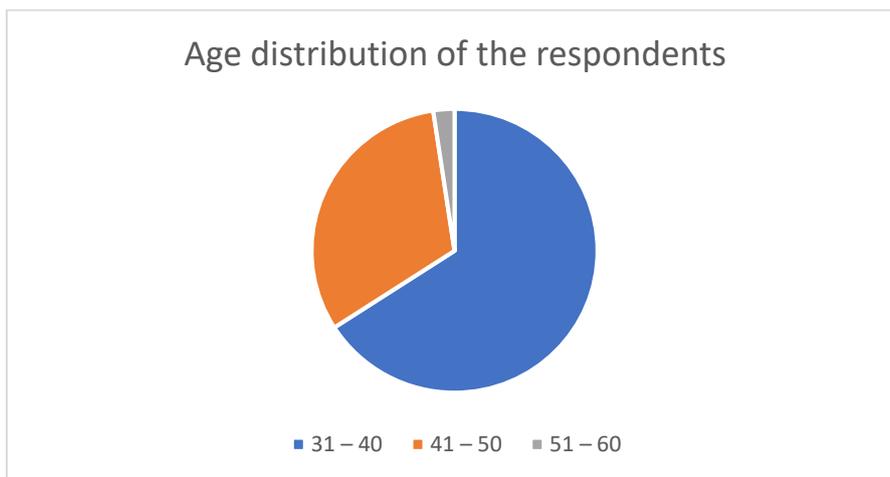


Figure 2 Age Distribution of Respondents

The four independent variables were tested for their relationship with the effectiveness of virtual learning. From the study, it was found that a positive and significant relationship exist between all variables. However, according to the result obtained from Table 1, Pearson correlation test shows that T - transmit knowledge to student and M – maintaining professional development has a weak correlation with the effectiveness of virtual learning at a value of 0.385 and 0.401 respectively.

In order to make sure that variable has strong relationship r value has to be more than 0.5. Apart from that, the result also showed that E – establish teachers and student’s involvement and A – assessing students in learning has a positive strong relationship with the effectiveness of virtual learning. Establish teachers and student’s involvement and assessing students in learning showed a result of 0.537 and 0.522 at a significant level of 0.01. Overall, when conducting a Pearson correlation analysis all variable is positively correlated with the effectiveness of virtual learning.

Table 1 Correlation between variable

		T	E	A	M	VLE
Transmit knowledge to students	Pearson Correlation	1				0.385
	Significance level, P					0.013
Establish teachers and students involvement	Pearson Correlation	0.803	1			0.537
	Significance level, P	0.000				0.000
Assessing students in learning	Pearson Correlation	0.540	0.556	1		0.522
	Significance level, P	0.000	0.000			0.000

Maintaining professional development	Pearson Correlation	.576	0.557	0.849	1	0.401
	Significance level, P	0.000	0.000	0.000		0.009
The effectiveness of virtual learning	Pearson Correlation	.385	0.537	0.522	0.401	1
	Significance level, P	0.013	0.000	0.000	0.009	

*Correlation is significant at the 0.01 level (2 tailed)

Table 2 Regression analysis

	B	T - stat	P – value
Constant	1.297	1.622	0.114
Transmit knowledge to students	-0.257	-0.819	0.418
Establish teachers and students involvement	0.626	2.312	0.027
Assessing students in learning	0.496	2.115	0.041
Maintaining professional development	-0.223	-0.911	0.368
R ²		0.392	
Adjusted R ²		0.324	

All the variables were tested using multiple regression analysis in determining the relationship between variables. Results in Table 2 showed that establish teachers and students’ involvement and assessing students in learning has a positive significance relationship with the effectiveness of virtual learning, with p value < 0.05. This can also be seen from a study done by Leonardo (2017), when teachers use different teaching methods, learning activities and resources to cater to various needs of students. Students were aware of their performance when they were given feedback by teachers (Leonardo, 2017). This results in having better participation in virtual classes and at the same time create better communication between teachers and students. A study done by Juan (2008) mentioned that when teachers play a role as tutors, students were able to engaged with them as teachers provided comprehensive information about topics taught in class.

The larger the coefficient of Beta, *B*, the stronger the determinant. So, establish teachers and student’s involvement (*B* = 0.626) is the stronger predictor for effectiveness of virtual learning, followed by assessing students in learning (*B* = 0.496). Therefore, H2 and H3 are accepted. Transmit knowledge to students and maintaining professional development showed negative relationship with the effectiveness of virtual learning with a p value 0.418 and 0.368 respectively. This result showed a value of more than 0.05 which resulted in H1 and H4 being rejected.

Discussion and Conclusion

Based on the results, we can clearly see that the lecturers have the perception that establishing teachers and students' involvement will help in the effectiveness of virtual learning. It will create an environment of respect and students will be able to interact with fellow peers and teachers without feeling left out. It is also vital for teachers to pose good example to students as students will consider teachers as their role models. As the teachers demonstrate proper way of handling classes, it creates a positive learning environment that will benefit everyone in the virtual learning settings. Good time management and maintaining organised virtual classes could also play an important role in motivating students to imitate good habits.

Assessing students in learning also has a positive relationship with the effectiveness of virtual learning. The preparation of questions in any assessments must be guided with the course learning outcome and effective teaching framework. Teachers should be able to prepare assessment materials based on students' level of understanding and create questions that can challenge the students to think critically so that they are prepared for 21st century learning. Adding to that, in order for students to perform well in the assessment given, teachers should take the initiative to prepare more practice questions for them through the use of blended learning tools.

However, it is found that transmitting knowledge to students has a weak correlation with the effectiveness of virtual learning. Even though teachers have done necessary preparations of online learning materials such as online notes and videos, some students did not take initiative to view the uploaded materials before classes. There were also cases whereby teachers are not keen in conducting virtual classes resulting to teachers giving pre-recorded lecture videos for students to view during classes. This action proved that students found it difficult to understand the topic taught as there are lacking of mutual interaction, plus turning virtual leaning into something burdensome and **unfavourable** to students. In contrary, the researchers found that it is still important for teachers to take time and effort to plan for classes. Meador (2019) mentioned that educator should conduct research when they want to prepare or plan for their classes. As educators, they should understand contents of subjects and create plans on ways to deliver it effectively as it is an educator's duty to deliver in a way that resonates with students (Meador, 2019).

Based on our findings, the researchers also found that maintaining professional development had a weak correlation with the effectiveness of virtual learning. With that, we can assume that some teachers have the perception that as long as students were able to learn something from the classes that they attended, students were said to achieve their leaning outcomes. Teachers did not emphasize on the accuracy of their teaching framework and maintain an appropriate teaching approach as they prefer to

have more interaction with their students. Their perspective is if students were able to respect teachers during lessons then they will automatically create interest in learning whether it is in the physical classroom or virtual classroom.

As a whole, the researchers found that this framework will guide teachers to identify their responsibilities and help students improve learning. Students' learning will improve when teachers manage to transmit knowledge to students effectively. At the same time, it is the goal of every educator to have teaching and learning process that is impactful and meaningful, not only for themselves but more importantly for the students. This can be proven when there are teachers and students involvement during virtual classes. This study also revealed that **assessments** were conducted to test the knowledge of students who participate in virtual classes. The positive result shown indicated that teachers have prepared sufficient online learning materials resulting to students able to have better understanding of their subjects.

Recommendations

1. This study should be done by extending the number of respondents which consist of educators from schools.
2. This study should be carried out by comparing virtual learning effectiveness from different learning institutions.
3. Future research can be done based on the negative correlation between transmitting knowledge to students and maintaining professional development with the effectiveness of virtual learning.

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Appendices

Questionnaire

Part A: Respondent Demographic

1. Gender: Male Female
2. Age: 21 – 30 31 – 40 41 – 50 51 - 60
3. Ethnic (race): Malay Chinese Indian Others _____
4. Teaching level: Diploma Foundation
 Undergraduate Post graduate

Part B: VL - Virtual Learning

1 = Strongly disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly agree
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VL. Virtual learning _____.	1	2	3	4	5
VL1. is a virtual space that teachers & students use to share resources and interact with each other.					
VL2. is a type of learning that uses devices and Internet connection					
VL3. involves synchronous and asynchronous activities					
VL4. is a new paradigm for teaching & learning					

Part C: Implementation of T.E.A.M. Concept

1 = Strongly disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly agree
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T. Planning and preparation that should be done to transmit knowledge to students by _____.	1	2	3	4	5
T1. demonstrating knowledge of content and pedagogy – <i>good command of subjects, clear explanation, feedback to students</i>					
T2. demonstrating knowledge of students – <i>knowledge about learning process, students' skills, database of students with special needs</i>					
T3. setting instructional outcomes – <i>challenging cognitive level, varies for students with different abilities</i>					
T4. designing coherent instruction – <i>use various resources, structured lesson plans, provide instructional outcome</i>					

E. A teacher should create a virtual class environment which consist of _____.	1	2	3	4	5
E1. respect and rapport – <i>encouragement, respectful talk, active listening, body language</i>					
E2. culture for learning – <i>students take pride in their work, expectation of high quality work, recognition of effort</i>					
E3. virtual classroom procedures – <i>organised routines, management of materials & instructional groups</i>					
E4. managing students' behaviour – <i>reinforcement of positive behaviour, teacher's awareness of students' behaviour</i>					

A. Students' learning in a virtual learning environment can be assessed by _____.	1	2	3	4	5
A1. communicating with students - <i>using oral and written language, transparency of lesson purpose</i>					
A2. using questioning and discussion technique – <i>quality of questions, questions with high cognitive level</i>					
A3. engaging students in learning – <i>activities, assignment, grouping of students, instructional materials</i>					
A4. using assessment in instruction – <i>assessment criteria, feedback on learning, monitor students' progress in learning</i>					

M. Professional development can be maintained by _____.	1	2	3	4	5
M1. reflecting on teaching – <i>accuracy, improvement in teaching</i>					
M2. participating in professional community – <i>relationship with colleague, participation in university or region projects</i>					
M3. growing & developing professionally - <i>enhancing content knowledge and pedagogical skill, attending training</i>					
M4. showing professionalism – <i>act with integrity, having reputation, service to students</i>					

Part D: VLE – Virtual Learning Effectiveness

1 = Strongly disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly agree
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VLE. The effectiveness of introducing virtual learning is to make sure _____.	1	2	3	4	5
VLE1. it helps students to develop independent learning					
VLE2. good interaction is fostered between teachers and students					
VLE3. students will be enthusiastic and motivated by the flexibility and feedback given by teachers					
VLE4. content knowledge and pedagogical skills will be further enhanced					

-END-



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